

## Forests and Woodlands

### F-CTBW *Populus deltoides* - *Salix nigra* Forest Eastern Cottonwood - Black Willow Forest

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#### Associations and Alliances

*Populus deltoides* - *Salix nigra* Forest

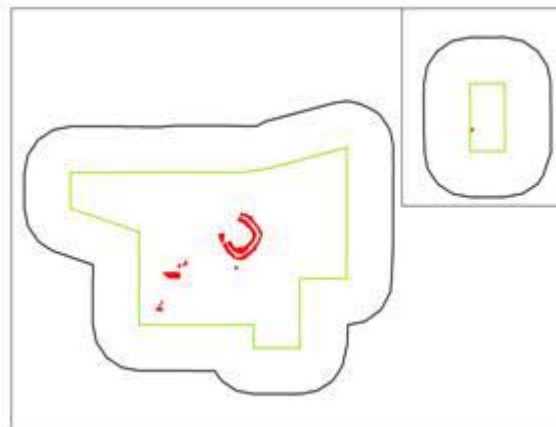
#### Common Species

*Populus deltoides*

*Salix nigra*

*Toxicodendron rydbergii*

#### Range and Distribution



#### Description

Cottonwood forests occur at FOLS only along the banks of the former oxbow lake and in small patches along the Pawnee River. It is likely that this type was once more prevalent but clearing for fuel and timber changed the hydrology and sediment load decreasing the extent of this community. This type and its associated species are tied directly to the dynamics of flooding and deposition/scouring of sediments by the river. Hydrologic changes in the region have led to the oxbow remaining dry throughout the season. Due to these changes, no young cottonwoods have been found in the area. Where it was found this type was dominated by a complete canopy of broadleaf deciduous trees including tall, old cottonwoods and black willow with a near complete understory of poison ivy. Other deciduous trees common to the green ash map unit were sometimes encountered in this type. This overlap in species probably caused some confusion in the mapping. The shrub layer is conspicuously absent in some of the stands at FOLS and the herbaceous layer can be thick and lush but is often patchy and sparse. On the true color imagery this type appeared as fluffy, light green trees with larger crowns than the green ash type.

#### Photo Signature Examples



#### Representative Ground Photo



## VEGETATION CATEGORY DESCRIPTIONS

### *Populus deltoides* - *Salix nigra* Forest

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COMMON NAME	Eastern Cottonwood - Black Willow Forest	
PHYSIOGNOMIC CLASS	I	Forest
PHYSIOGNOMIC SUBCLASS	I.B	Deciduous forest
PHYSIOGNOMIC GROUP	I.B.2	Cold-deciduous forest
PHYSIOGNOMIC SUBGROUP	I.B.2.N	Natural/semi-natural cold-deciduous forest
FORMATION	I.B.2.N.d	Temporarily flooded cold-deciduous forest
ALLIANCE	<i>Populus deltoides</i> Temporarily Flooded Forest Alliance	

**Association Identifier:** CEGLO02018

### RANGE

#### *Globally*

This cottonwood - black willow forest is characteristic of the fronts and banks of most major rivers and streams throughout the Central Forest Region, extending into the northern forest particularly within the Mississippi, Ohio, and Missouri River systems, extending from Ohio west to Minnesota, southward to Oklahoma, and east to Kentucky. This community once occupied vast tracts of land along river fronts and floodplain depressions. Land clearing, ditching, and draining for conversion to cropland, and logging have eliminated much of the pre-settlement stands of this natural community (NatureServe 2006).

#### *Fort Larned National Historic Site*

Cottonwood forest occurs at Fort Larned National Historic Site only along the banks of the former oxbow lake. Historical accounts suggest that cottonwood trees were dominant along creeks and rivers in the region, and likely grew along the Pawnee River prior to settlement. Clearing of the original trees for fuel and timber and changes in the hydrology and sediment load of the river have decreased the extent of this community along the Pawnee River.

### ENVIRONMENTAL DESCRIPTION

#### *Globally*

This community is quick to colonize newly deposited substrates adjacent to rivers, lakes, streams, and in frequently flooded, low, wet depressions in floodplains. Dynamic substrate availability caused by frequent flooding encourages the establishment and maintenance of this community type (NatureServe 2006).

#### *Fort Larned National Historic Site*

The community is found on slopes on both sides of the former oxbow.

## MOST ABUNDANT SPECIES

### Globally

<u>Strata</u>	<u>Species</u>
Tree	<i>Populus deltoides</i> , <i>Salix nigra</i>
Woody Vine	<i>Toxicodendron rydbergii</i>
Herb	<i>Bidens aristosa</i> , <i>Symphyotrichum lanceolatum</i>

### Fort Larned National Historic Site

<u>Strata</u>	<u>Species</u>
Tree	<i>Populus deltoides</i>
Woody Vine	<i>Toxicodendron rydbergii</i>

## CHARACTERISTIC SPECIES

### Fort Larned National Historic Site

<u>Strata</u>	<u>Species</u>
Tree	<i>Populus deltoides</i>

## VEGETATION DESCRIPTION

### Globally

This community is dominated by broadleaf deciduous trees. Canopy closure is complete, or nearly so, with few shrubs and limited tree species found in the type. The tree canopy is tall (to 30 m) and dominated by *Populus deltoides* and *Salix nigra*, although *Fraxinus pennsylvanica*, *Acer saccharinum*, *Acer negundo*, *Platanus occidentalis*, and *Ulmus americana* are also commonly encountered. Tree diversity is limited due to the dynamics of flooding and deposition/scouring of sediments. The subcanopy is almost exclusively *Salix nigra*. The shrub layer is conspicuously absent in many parts of the range. Herbaceous growth can be thick and lush but is often patchy and sparse (NatureServe 2006).

### Fort Larned National Historic Site

Cottonwood forest is dominated by a complete canopy of tall, old cottonwoods with a near complete understory of poison ivy.

## COMMENTS

Hydrologic changes in the region have led to the oxbow remaining dry throughout the season. Due to these changes, no young cottonwoods have been found in the area.

MAP CODE: T1 (Tree 1)

PLOTS: BG, BH, BI